

[REDACTED]

Page 1

Accept

Setup Start

Stop

**Cust Item ID:**[illegible]

Customer:

Reference:

Date: 10-8-31

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

**Insp.
Stamp**

Revision Nbr

D3407

Rev E

100

0.00

Doosan

DOOSAN LATHE

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA596 Rev: AA & Dwg D3407 Rev: E ☐ 2-Deburr

110

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

120

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61687

Tuesday, August 31, 2010 11:49:17 AM

Page 2

Item ID: D3407-1

Accept

Setup Start

Revision ID:

Stop

Item Name: Stem

Start Date: 8/31/2010 Start Qty: 12.00

Cust Item ID:

Required Date: 9/7/2010 Req'd Qty: 12.00

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

10/11/04 (12x)

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/11/04

MF

10-11-4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, August 31, 2010 11:49:21 AM

Page 1

Work Order ID: 61687

Parent Item: D3407-1

Parent Item Name: Stem




Start Date: 8/31/2010

Required Date: 9/7/2010

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A 05.10.18 New issue KJ/EC
IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD
IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174R0.750  17-4 round bar .750		Purchased	No			100	f	27.1500	0.366	4.623158			

Location

Loc Qty

Loc Code

MAT

27.15

27.15

114488

5.43'

10.11.2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	6687
Description: Tow Ring		Part Number:	D3407-1
Inspection Dwg: D3407 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.073	/		Verifier	all RD-02
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.265	/		Mic. over wires	AQ-06
Major Ø	Max: 0.249 Min: 0.2425	.245	/			
Ø0.625	+/-0.010	.625	/			
Ø0.363	+/-0.010	.364	/			
Ø0.750	+/-0.010	.751	/			
R0.100	+/-0.010	.100	/		Gage	
0.470	+/-0.010	.470	/			
0.500	+/-0.010	.502	/			
3.250	+/-0.010	3.250	/			
4.250	+0.000/-0.010	4.245	/			
5.270	+/-0.010	5.270	/			
0.150	+/-0.010	.150	/			
0.550	+/-0.010	.550	/			
0.625	+/-0.010	.628	/			
0.250	+0.010/-0.000	.252	/			

Measured by: <i>[Signature]</i>	Audited by: M.A	Prototype Approval:	N/A
Date: 10.11.2	Date: 10/11/03	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD <i>[Signature]</i>	<i>[Signature]</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

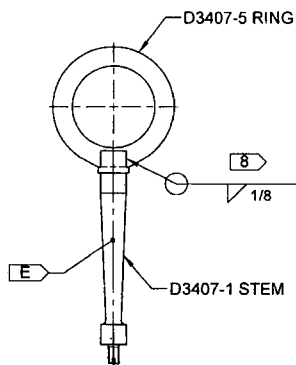
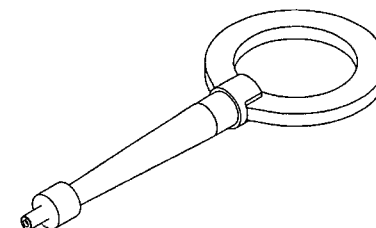
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

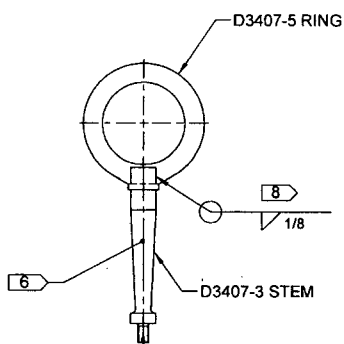
NOTE: Date & initial all entries

QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM

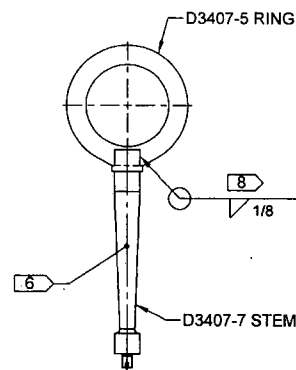
4 SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 61687
BS10-8-31



D3407-041 TOW RING



D3407-043 TOW RING

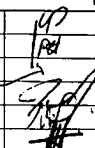


D3407-045 TOW RING

RELEASED

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3407	SHEET 1 OF
APPROVED		TITLE	SCALE
DE APPR.	TOW RING	NTS	
DATE	08.07.23		
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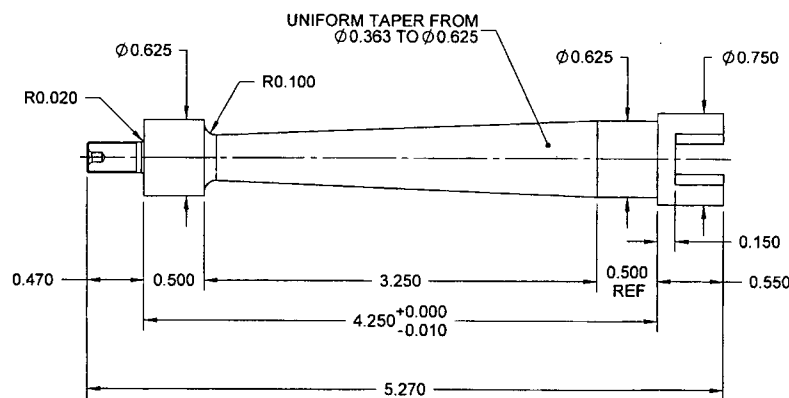
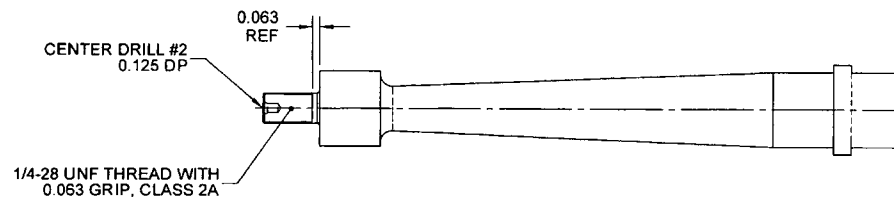
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

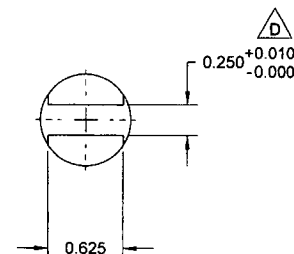
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

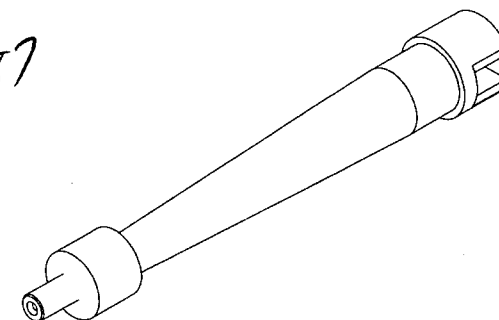
NOTE: Date & initial all entries



D3407-1 STEM



W061687



- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.33 lbs

DESIGN		DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
DATE	08.07.23	<small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

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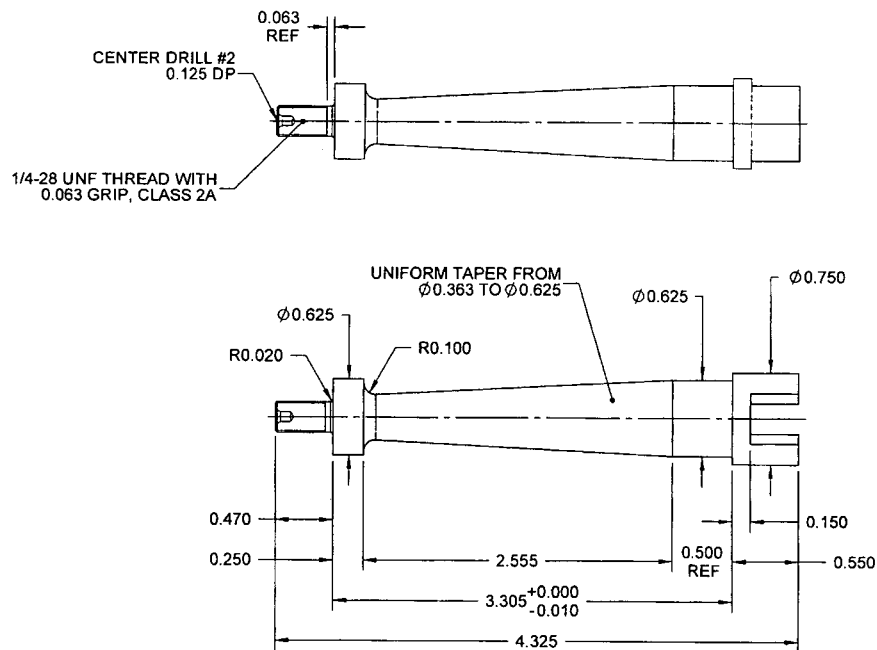
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

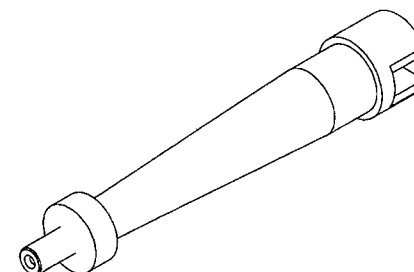
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3407-3 STEM

w/061687



- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

RELEASED
08-08-01 RAB

DESIGN		DART AEROSPACE USA, INC.	
DRAWN	<i>JP</i>	PORT HADLOCK, WA	
CHECKED	<i>JP</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>JP</i>	D3407	SHEET 3 OF 5
APPROVED	<i>JP</i>	TITLE	SCALE
DE APPR.	<i>JP</i>	TOW RING	NTS
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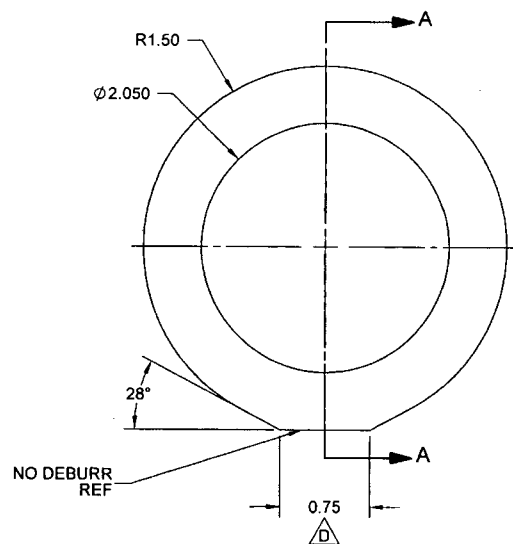
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

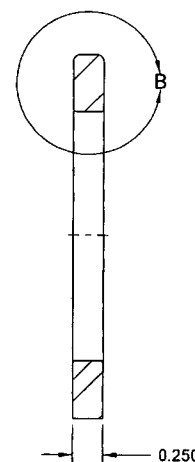
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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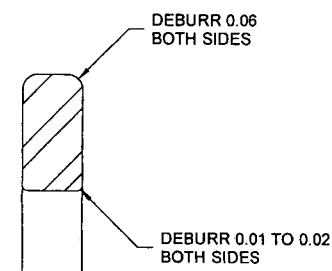
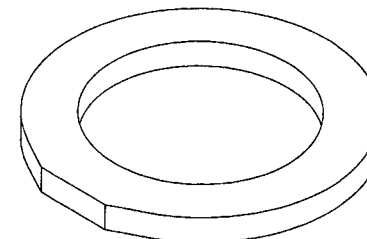
NOTE: Date & initial all entries



D3407-5 RING



SECTION A-A



**DETAIL B
SCALE 2X**

RELEASED
08-08-01/14

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	92	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	1/81		
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 4 OF 5
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DE APPR.		TOW RING	NTS
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W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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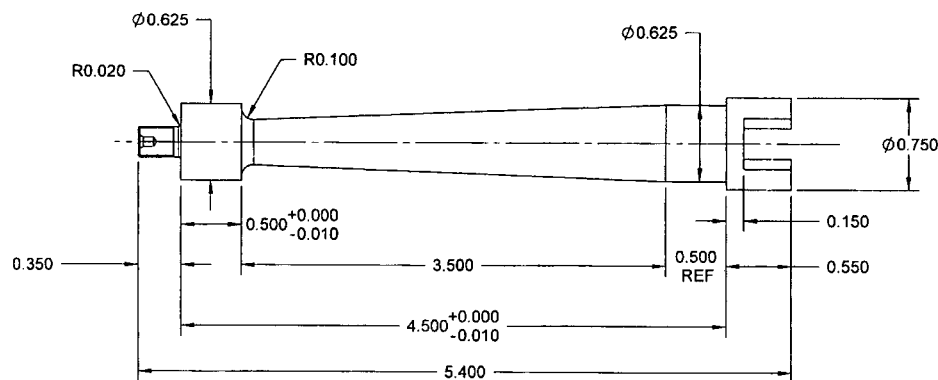
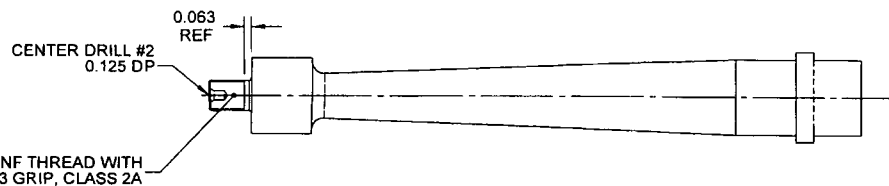
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D

C

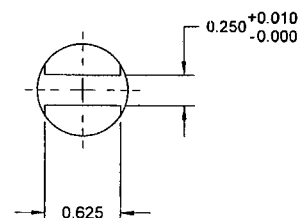
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
D3407-7 STEM

u/o cell 687



RELEASED

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	IPM	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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8 7 6 5 4 3 2 1

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